APPENDIX NIM
(NETWORK INTERCONNECTION METHODS)

TABLE OF CONTENTS

APPENDIX NIM
(NETWORK INTERCONNECTION METHODS)

1. INTRODUCTION

1.1 This Appendix sets forth the terms and conditions that Network Interconnection Methods (NIM) is provided by the applicable SBC Communications Inc. (SBC) owned Incumbent Local Exchange Carrier (ILEC) and **SPRINT**. This Appendix describes the physical architecture for Interconnection of the Parties' facilities and equipment for the transmission and routing of Telephone Exchange Service traffic and Exchange Access traffic between the respective Customers of the Parties pursuant to Section 251(c)(2) of the Act; provided, however, Interconnection may not be used solely for the purpose of originating a Party's own interexchange traffic.

1.2 Definitions of terms used in this Appendix are contained in the General Terms and Conditions, except as specifically identified herein. The following definitions from the General Terms and Conditions are legitimately related to this Appendix: **SBC-13STATE**, **SBC-SWBT**, **PACIFIC**, **NEVADA**, **SNET,** **SBC-AMERITECH.**

1.3 Network Interconnection Methods (NIMs) include, but are not limited to, Physical Collocation Interconnection; Virtual Collocation Interconnection; Leased Facilities Interconnection; Fiber Meet Interconnection; and other technically feasible methods requested pursuant and subject to the BFR process. One or more of these methods may be used to effect the Interconnection.

1.3.1 Trunking requirements associated with Interconnection are contained in Appendix ITR.

1.4 **SBC-13STATE** shall provide Interconnection for **SPRINT**'s facilities and equipment for the transmission and routing of telephone exchange service and exchange access, at a level of quality that is equal to that which **SBC-13STATE** provides itself, a subsidiary, an affiliate, or any other party to which **SBC-13STATE** provides Interconnection and on rates, terms and conditions that are just, reasonable and non-discriminatory.

1.5 The Parties shall effect an Interconnection that is efficient, fair and equitable with either (a) the establishment and use of multiple points of interconnection ("POIs") pursuant to section 2 below, or, at CLEC's election, (b) the establishment and use of a single point of interconnection per LATA, pursuant to section 2.2 below, in which event CLEC shall either, at CLEC's election, (i) bear half the cost of the Affected Facilities, as that term is defined in section 2.4.2 below, or (ii)

compensate **SBC-13STATE** for the transport of those calls identified in section 2.4.2 below. A Point of Interconnection (POI) is a point in the network where the Parties deliver Interconnection traffic to each other, and also serves as a demarcation point between the facilities that each Party is responsible to provide. At least one POI must be established within the **SBC-13STATE** LATA where the CLEC will serve End Users.

2. NETWORK INTERCONNECTION ARCHITECTURE PLAN

2.1 **SBC-13STATE**'s network is partly comprised of End Office switches, Tandem switches that serve local only traffic (**SBC-SWBT**), Tandem switches that serve IntraLATA and InterLATA traffic, and Tandem switches that serve a combination of local, IntraLATA and InterLATA traffic. **SBC-13STATE**'s network architecture in any given local exchange area and/or LATA can vary markedly from another local exchange area/LATA. Using one or more of the NIMs herein, the Parties will agree to a physical architecture plan for a specific Interconnection area. The physical architecture plan will, at a minimum, include the location of **SPRINT**'s switch(es) and **SBC-13STATE**'s End Office switch(es) and/or Tandem switch(es) to be interconnected, the facilities that will connect the two networks and which Party will provide (be financially responsible for) the Interconnection facilities. At the time of implementation in a given local exchange area the plan will be documented and signed by appropriate representatives of the Parties, indicating their mutual agreement to the physical architecture plan.

2.2 Points of Interconnection (POIs): A Point of Interconnection (POI) is a point in the network where the Parties deliver Interconnection traffic to each other, and also serves as a demarcation point between the facilities that each Party is responsible to provide.

2.3 This section shall apply if and only if CLEC elects to establish and use multiple POIs as permitted by section 1.5 above.

2.3.1 The Parties shall negotiate the POI and the architecture in each location that will seek to mutually minimize and equalize investment.

2.3.2 The Parties agree to meet as often as necessary to negotiate the number and location of new POIs. The overall goal of POI selection will be to achieve a balance in the provision of facilities that is fair to both Parties. Criteria to be used in determining POIs in local exchange areas or LATAs include existing facility capacity, location of existing POIs, relative costs, and future capacity needs. Agreement to the location of POIs is based on the network architecture existing at the time the POI(s) is/are negotiated. In the event either Party makes subsequent changes to its network architecture, including but not limited to trunking changes or adding new switches, then the Parties will negotiate new POIs. The network

interconnection architecture plan will be updated to reflect the addition of new POIs.

2.4 This section shall apply if and only if **SPRINT** elects to establish and use a single POI per LATA as permitted by section 1.5 above.

2.4.1 **SPRINT** may originate or terminate calls on its side of the POI for delivery to or from a **SBC-13STATE** end user physically located in the same tandem serving area or the same local exchange area as that in which the POI is located. For such calls, **SPRINT** and **SBC-13STATE** shall each be financially responsible for the facilities, trunking and equipment on its side of the POI. Provided, however, that nothing in this section is in derogation of or otherwise affects either carrier's obligation, if any, to pay Reciprocal Compensation charges or access charges on long distance calling to the other carrier.

2.4.2 **SPRINT** may originate or terminate calls on its side of the POI for delivery to or from a **SBC-13STATE** End User physically located in a different tandem serving area and a different local exchange area, or a SWBT End User in a different mandatory local calling area, from that in which the POI is located (hereinafter "long haul calls"). To compensate **SBC-13STATE** for that portion of the delivery of long haul calls on **SBC-13STATE**'s side of the POI that is outside the local exchange area in which the POI is located, **SPRINT** shall bear the cost of the Affected Facilities. "Affected Facilities" means those facilities on which such long haul calls are transported on **SBC-13STATE**''s side of the POI that are outside the local exchange area in which the POI is located. Such cost is calculated as airline miles from the SBC switch in which the trunks are installed to the POI, less 15 miles. The cost of the Affected Facilities shall be assessed at UNE rates. Provided, however, that nothing in this section is in derogation of or otherwise affects either carrier's obligation, if any, to pay Reciprocal Compensation charges or access charges on long distance calling to the other carrier.

2.5 The Parties agree to meet as often as necessary to negotiate the selection of new POIs. The overall goal of POI selection will be to achieve a balance in the provision of facilities that is fair to both Parties. Criteria to be used in determining POIs for each geography (LATA, tandem area, etc.) include existing facility capacity, location of existing POIs, traffic volumes, relative costs, future capacity needs, etc. Agreement to the location of POIs is based on the network architecture existing at the time the POI(s) is/are negotiated. In the event either Party makes subsequent changes to its network architecture, including but not limited to trunking changes or adding new switches, then the Parties will negotiate new POIs. The mutually agreed to POIs will be documented and distributed to both Parties.

2.6 Each Party is responsible for the facilities to its side of the negotiated POI(s) and may utilize any method of Interconnection described in this Appendix. Each Party is responsible for the appropriate sizing, operation, and maintenance of the transport facility to the POI(s). The parties agree to provide sufficient facilities for the Interconnection trunk groups required for the exchange of traffic between SPRINT and SBC-13STATE.

2.7 Either Party must provide thirty (30) days written notice of any intent to change to the physical architecture plan.

2.8 SPRINT is solely responsible for the facilities that carry OS/DA, 911, mass calling and Meet-Point trunk groups as specified in Appendix ITR.

2.9 Subject to the requirements defined in Appendix ITR, in each LATA the Parties agree to provide, at a minimum, sufficient facilities so that a local Interconnection trunk group can be established from the **SPRINT** switch to each **SBC-13STATE** **SNET**, **PACIFIC**, **NEVADA**, and **SBC-AMERITECH** applicable Tandem POI where SPRINT originates or terminates local and/or toll traffic with SBC.

2.10 If **SPRINT** has established Collocation in an **SBC-13STATE** End Office, the facility for the Direct End Office Trunks (DEOTS) to that End Office shall be the financial responsibility of **SPRINT**.

2.11 Technical Interfaces

2.911.1 The Interconnection facilities provided by each Party shall be formatted using either Alternative Mark Inversion (AMI) line code with Superframe format framing or Bipolar 8 Zero Signaling (B8ZS) with Extended Superframe format framing or any mutually agreeable line coding and framing.

2.911.2 Electrical handoffs at the POI(s) will be at the DS1 or DS3 level. When a DS3 handoff is agreed to by the Parties, SBC-13STATE will provide any multiplexing required for DS1 facilities or trunking at their end and SPRINT will provide any DS1 multiplexing required for facilities or trunking at their end.

2.11.3 When the Parties demonstrate the need for Optical handoffs at the OC-n level, the parties will meet to negotiate specific Optical handoff needs.

3. METHODS OF INTERCONNECTION

3.1 Physical Collocation Interconnection

3.1.1 When **SPRINT** provides their own facilities or uses the facilities of a 3rd party to a **SBC-13STATE** Tandem or End Office and wishes to place their own transport terminating equipment at that location, **SPRINT** may Interconnect using the provisions of Physical Collocation as set forth in Appendix Collocation or applicable state tariff.

3.2 Virtual Collocation Interconnection

3.2.1 When **SPRINT** provides their own facilities or uses the facilities of a 3rd party to a **SBC-13STATE** Tandem or End Office and wishes for **SBC-13STATE** to place transport terminating equipment at that location on the **SPRINT**'s behalf, they may Interconnect using the provisions of Virtual Collocation as set forth in Appendix Collocation or applicable tariff. Virtual Collocation allows **SPRINT** to choose the equipment vendor and does not require that **SPRINT** be Physically Collocated.

3.3 Leased Facility Interconnection ("LFI")

3.3.1 Where facilities exist, either Party may lease facilities from the other Party as defined in Section 6 of this Appendix.

3.3.2 **SBC-13STATE** will allow **SPRINT** to lease the same physical access facilities (*e.g.*, dedicated transport access facilities) to provision trunk groups to carry Local and intraLATA traffic and separate trunk groups to carry interLATA traffic, provided such arrangement is not for the purpose of avoiding access facility charges associated with dedicated transport access facilities. In the above circumstances, access facility rates will still apply regardless of the percentage of Local and intraLATA trunk groups provisioned on those facilities.

3.4 Fiber Meet Interconnection

3.4.1 Fiber Meet Interconnection between **SBC-13STATE** and **SPRINT** can occur at any mutually agreeable and technically feasible point between **SPRINT**'s premises and an **SBC-13STATE** Tandem or End Office within each local exchange area (**SBC-SWBT**) or LATA (**SBC-AMERITECH**, **SNET**, **PACIFIC**, and **NEVADA**).

3.4.2 When the Parties agree to interconnect their networks pursuant to the Fiber Meet, a single point-to-point linear chain SONET system must be utilized. Only Interconnection trunking shall be provisioned over this jointly provided facility

3.4.3 Neither Party will be allowed to access the Data Communications Channel ("DCC") of the other Party's Fiber Optic Terminal (FOT). The Fiber Meet will be designed so that each Party may, as far as is technically feasible, independently select the transmission, multiplexing, and fiber terminating equipment to be used on its side of the POI(s). The Parties will work cooperatively to achieve equipment and vendor compatibility of the FOT equipment**.** The Parties may share the investment of the fiber as mutually agreed.

3.4.4 Requirements for such Interconnection specifications will be defined in joint engineering planning sessions between the Parties. The Parties may share the investment of the fiber as mutually agreed.

3.4.5 In addition to the semi-annual trunk forecast process, discussed in Appendix ITR, discussions to provide relief to existing facilities can be initiated by either party. Actual system augmentations will be initiated only upon mutual agreement. Facilities will be planned for to accommodate the verified and mutually agreed upon trunk forecast.

3.4.6 Both Parties will negotiate a project service date and corresponding work schedule to construct relief facilities prior to facilities exhaust.

3.4.7 There are four basic Fiber Meet design options. The option selected must be mutually agreeable to both Parties. Additional arrangements may be mutually developed and agreed to by the Parties pursuant to the requirements of this section.

3.4.7.1 Design One: **SPRINT**'s fiber cable (four fibers) and **SBC-13STATE**'s fiber cable (four fibers) will be connected at a mutually agreeable and technically feasible mid-point between **SPRINT** and **SBC-13STATE** locations. This interconnection point will be at a mutually agreeable location, with the intent of a 50/50 share in the cost of the facilities. Each Parties' fiber cables will be terminated and then cross connected on a fiber termination panel. **SPRINT** and SBC will provide their own fiber termination panels and will be responsible for terminating and testing their own fibers. Each Party will supply fiber optic equipment at their respective end. The POI will be at the fiber termination panel at the mid-point meet.

3.4.7.2 Design Two: **SPRINT** will provide fiber cable to the last entrance (or **SBC-13STATE** designated) manhole at the **SBC-13STATE** Tandem or End Office switch. **SBC-13STATE** shall make all necessary preparations to receive and to allow and enable **SPRINT**

to deliver fiber optic facilities into that manhole. **SPRINT** will provide a sufficient length of Fiber cable for **SBC-13STATE** to pull through the **SBC-13STATE** cable vault. **SPRINT** shall deliver and maintain such strands wholly at its own expense up to the POI. **SBC-13STATE** shall take the fiber from the manhole and terminate it inside **SBC-13STATE**'s office at the cable vault at **SBC-13STATE**'s expense. In this case the POI shall be at the **SBC-13STATE** designated manhole location.

3.4.7.3 Design Three: **SBC-13STATE** will provide fiber cable to a mutually agreed upon manhole towards the last entrance (or **SPRINT** designated) manhole at the **SPRINT** location. **SPRINT** shall make all necessary preparations to receive and to allow and enable **SBC-13STATE** to deliver fiber optic facilities into that manhole. **SBC-13STATE** will provide a sufficient length of fiber cable for **SPRINT** to pull to a mutually agreed upon point of termination **SBC-13STATE** shall deliver and maintain such strands wholly at its own expense up to the POI. **SPRINT** shall take the fiber from the manhole and terminate it inside **SPRINT**'s office on the FDF at **SPRINT**'s expense. In this case the POI shall be at the **SPRINT** designated manhole location.

3.4.7.4 Design Four: Both **SPRINT** and **SBC-13STATE** each provide two fibers between their locations to terminate at each parties' FOT This design may only be considered where existing fibers are available and there is a mutual benefit to both Parties. **SBC-13STATE** will provide the fibers associated with the working side of the system. **SPRINT** will provide the fibers associated with the protection side of the system. The Parties will work cooperatively to terminate each other's fiber in order to provision this joint point-to-point linear chain SONET system. Both Parties will work cooperatively to determine the appropriate technical handoff for purposes of demarcation and fault isolation. The POI will be defined as being at the **SBC-13STATE** location.

3.4.8 **SPRINT** location includes FOTs, multiplexing and fiber required to terminate the optical signal provided from **SBC-13STATE**. This location is **SPRINT**'s responsibility to provision and maintain.

3.4.9 The **SBC-13STATE** location includes all **SBC-13STATE** FOT, multiplexing and fiber required to terminate the optical signal provided from **SPRINT**. This location is **SBC-13STATE**'s responsibility to provision and maintain.

3.4.10 **SBC-13STATE** and **SPRINT** shall, solely at their own expense, procure, install, and maintain the agreed-upon FOT equipment in each of their locations where the Parties established a Fiber Meet in capacity sufficient to provision and maintain all trunk groups prescribed by Appendix ITR for the purposes of Interconnection.

3.4.11 Each Party shall provide its own source for the synchronized timing of its FOT equipment.

3.4.12 **SPRINT** and **SBC-13STATE** will mutually agree on the capacity of the FOT(s) to be utilized based on equivalent DS1s or DS3s. Each Party will also agree upon the optical frequency and wavelength necessary to implement the Interconnection. The Parties will develop and agree upon methods for the capacity planning and management for these facilities, terms and conditions for over provisioning facilities, and the necessary processes to implement facilities as indicated below.

4. RESPONSIBILITIES OF THE PARTIES

4.1 For each local Interconnection within an **SBC-13STATE** area, **SPRINT** shall provide written notice to **SBC-13STATE** of the need to establish Interconnection in each local exchange area (**SBC-SWBT**) or LATA (**PACIFIC**, **NEVADA**, **SNET**, and **SBC-AMERITECH**). Such request will include (i) **SPRINT**'s Switch address, type of Switch and CLLI code; (ii) **SPRINT**'s requested Interconnection activation date; and (iii) a non-binding forecast of **SPRINT**'s trunking and facilities requirements.

4.2 Upon receipt of **SPRINT**'s notice to interconnect, the Parties shall schedule an meeting to negotiate and mutually agree on the network architecture (including trunking) to be documented as discussed in Section 2.1. The Interconnection activation date for an Interconnect shall be established based on then-existing force and load, the scope and complexity of the requested Interconnection and other relevant factors.

4.3 Either party may add or remove additional switches. The parties shall be entitled to provide written notice to establish such Interconnection; and the terms and conditions of this agreement will apply to such Interconnection.

4.4 The Parties recognize that a facility handoff point must be agreed to that establishes the demarcation for maintenance and provisioning responsibilities for each party on their side of the POI.

4.5 Facilities will be planned for in accordance with the trunk forecasts exchanged between the Parties as described in Appendix ITR.

4.6 The Parties will exchange SS7 signaling messages with one another, where and as available. The Parties will provide all line informationsignaling parameters including, but not limited to, Calling Party Number, Charge Number (if it is different from calling party number), andoriginating line information ("OLI"). For terminating FGD, either Partywill pass any CPN it receives from other carriers. All privacy indicatorswill be honored. Where available, network signaling information such asTransit Network Selection ("TNS") parameter (SS7 environment) will beprovided by the end office Party wherever such information is needed forcall routing or billing. Where TNS information has not been provided by theend office Party, the tandem Party will route originating Switched Accesstraffic to the IXC using available translations. The Parties will follow all industry Ordering and Billing Forum (OBF) adopted guidelines pertaining to TNS codes.

4.6 Either Party may combine local and intraLATA toll traffic withexchange access traffic on Feature Group B and D exchange access trunks it obtains from the other Party, and report to the other Party the factors necessary for proper billing of such combined traffic.

5. LEASING OF FACILITIES

5.1 Should **SBC-13STATE** wish to voluntarily provide **SPRINT** with Leased ILEC Facilities for the purpose of interconnection, the Parties agree that this voluntary offering is not required under FTA 96 nor under FCC UNE Remand Order 99-238, November 5, 1999, and is made with all rights reserved. The Parties further agree that any such voluntary offering is not subject to TELRIC cost methodologies, and instead will be market priced on an individual case basis. Should **SBC-13STATE** voluntarily offer Leased Facilities under this section, it (1) will advise the **SPRINT** in writing in advance of the applicable charges for Leased Facilities, and (2) will process the request only if **SPRINT** accepts such charges.

5.2 The purpose of this section is to cover both **SPRINT**'s and **SBC-SWBT**, **PACIFIC** and **NEVADA** leasing of facilities from each other for the purposes of Interconnection. **SBC-AMERITECH** and **SNET** offers leased facilities are from the applicable Access Tariff.

5.3 The Parties leasing of facilities from each other for purposes of this Appendix will be subject to mutual agreement of the Parties.

5.4 Leasing of facilities from either party for the above purposes and any future augmentations are subject to facility availability at the time of the written request.

5.5 The requesting Party will provide a written leased facility request that will specify the A- and Z-ends (CLLI codes, where known), equipment and multiplexing required and provide quantities requested. Requests for leasing of facilities for the

purposes of Interconnection and any future augmentations are subject to facility availability at the time of the request. Applicable rates, terms and conditions will be determined at the time of the request.

5.6 Requests by either Party for leased facilities where facilities, equipment, or riser cable do not exist will be considered and the requesting Party may agree to provide under a Bona Fide Request (BFR) Process as defined below, unless otherwise provided out of a tariff, at the providing Party's sole discretion:

5.6.1 A BFR will be submitted by the requesting Party in writing and will include a description of the facilities needed including the quantity, size (DS1 or DS3), A- and Z-end of the facilities, equipment and multiplexing requirements, and date needed.

5.6.2 The requesting Party may cancel a BFR at any time, but will pay the requested Party any reasonable and demonstrable costs of processing and/or implementing the BFR up to the date of cancellation.

5.6.3 Within ten (10) business days of its receipt, the requested Party will acknowledge receipt of the BFR.

5.6.4 Except under extraordinary circumstances, within thirty (30) business days of its receipt of a BFR, the requested Party will provide to the requesting Party a written response to the request. The response will confirm whether the leased facilities will be offered or not. If the leased facilities will be offered, the requested Party will provide the requesting Party a BFR quote which will include the applicable recurring rates and installation intervals.

5.6.5 Within 65 calendar days of its receipt of the BFR quote, the requesting Party must confirm its order. If not confirmed within 65 calendar days, the requested Party reserves the right to modify or withdraw its BFR quote.

6. APPLICABILITY OF OTHER RATES, TERMS AND CONDITIONS

6.1 Every interconnection, service and network element provided hereunder, shall be subject to all rates, terms and conditions contained in this Agreement which are legitimately related to such interconnection, service or network element as provided in Section 2.9 of the General Terms & Conditions.